THE MARTIN STAR

January 1944

A. A. ANDRAKE, Assistant Modification Manager

Experience Proves Valuable

IF experience in building airplanes means anything at all, then A. A. Andrake, Assistant Modification Manager for The Glenn L. Martin-Nebraska Company would be a valuable asset on the staff of any aircraft concern.

Andy, as he is known to Martineers in general, started the business of building airplanes 24 years ago when he joined The Glenn L. Martin Company in Cleveland as a technician in the power plant division of the Engineering Department. He brought with him a native genius that later resulted in the development of many refinements in airplane construction. Today, that inventive ability is invaluable in his job of helping direct the "hammer-an-a-pair-of-pliers" operations that are in order at all modification centers.

Strangely enough, Andrake's first experience with anything that would carry man into the air was in Omaha. The experience occurred in 1917, when, as a member of the Observation Balloon section of the Army Air Service, he underwent a period of training at Fort Omaha.

Andrake's affiliation with the Martin Company in Cleveland came shortly after his discharge from the Army. One of his first jobs with Martin was helping build the famed Martin mail plane, a modification of the twin-engine bomber that went into production in the Martin Cleveland plant just as the war closed. Later, he was placed in charge of the power plant division of engineering.

In 1928, when Martin decided to move the scene of his operations to Baltimore, Andrake left the company and became affiliated with H. L. Farro in the designing and building of various experimental types of planes. One of the planes built by the Andrake-Farro team was entered in the Guggenheim competitions and was one of the first planes to be equipped with flaps. This particular ship was given its first test flight by Jimmy Doolittle and was flown by Charles Lindbergh during one of his visits to Cleveland. Another of their experimental models was an autogiro built for the Pitcairn Company and was unique in many respects, having a complete coating of bakelite on the wings, tail and rotor blades.

In 1930, Andrake joined the Great Lakes Aircraft Corporation, the concern that had taken over the Martin plant in Cleveland when Martin moved to Baltimore. For the next six years, he served as the Company's chief designer. Leaving Great Lakes in 1936, Andrake accepted an offer from the Aviation Corporation of Williamsburg, Pa. and for the next two years acted as assistant to the vice-president. The Williamsburg firm was in the business of building airplane engines and propellers, and it was while with them that Andrake became particularly interested in the possibilities of metal blades.

Consequently, in 1938 he left the company and started in on his own, developing a method for making hollow steel propeller blades. In 1939, he went to Baltimore with the idea of selling his former boss, Mr. Martin, on the idea of building the blades that he had perfected. However, instead of selling propellers to the Martin Company, he wound up by taking a job with the firm as a goup engineer in Tool Design. Soon he was made tool engineer for the PBM-1 project.

In 1941, when the Martin Company began preparing for the opening of a plant in Omaha, Andrake was assigned the job of coordinating the tooling of the various automotive concerns that were to build the major sub-assemblies for the Omaha project. In October, he was sent to Omaha as Production Engineer. In February of this year, he became assistant to Modification Manager Charles Day.

It was only a short while ago that the scroll and pin of The Order of the Purple Martin, a legion of honor for Martineers whose efforts and genius has aided in the production of airplanes, was conferred upon Andrake. The award was made for his work in the development of scuttle valves for fuel tanks, an improved lubrication system, improved fuel tanks supports, a method for manufacturing cowlings, and improved tanks for storage of hydro-carbon products.

Married to Mary A. Kennedy of Cleveland in 1921, Andrake is the father of a boy who will apparently carry on the aircraft tradition. The boy, James M. Andrake, is a sophomore at Iowa State University where he is majoring in Aeronautical Engineering.

MARTIN U.S.A.

THE MARTIN STAR

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Straws in the Wind

LAST month, as the nation paused to pay tribute to the Wright Brothers on the fortieth anniversary of the airplane, two men of war focused their eyes beyond the struggle of men and nations. They envisioned a new era of peace in which the airplane would play a vital part. What they had to say is of concern to us who look to the skies for our future.

Robert P. Patterson, Assistant Secretary of War, told a distinguished audience at the Wright dinner in Washington, that the tremendous effort of our military transport services has set the pattern for future air commerce of peace. Patterson told of the rapid movement of men and materials to the warfronts by the Army transports. He cited a case where Eisenhower had called urgently for badly needed supplies, which were flown from our Atlantic coast to the toe of Italy in 48 hours! He told of a time when MacArthur had radioed that his men were running out of grenades on Guadalcanal. Five tons of the missiles were dispatched across the continent and the Pacific and were unloaded from Army airplanes in Australia three days later!

Frank Knox, Secretary of the Navy, told the same audience that great airliners would knit the nations in bonds of peace and he foresaw great airplanes hurdling the ocean barriers to achieve it. He paid signal tribute to the Navy's Martin Mars, cited the record of her first service flight and declared that this airplane would be the measure of post-war international transport.

And earlier the same evening, in a nation-wide broadcast, H. V. Kaltenborn had told of his amazing swing around the warfronts in Army and Navy transports, how a Martin Mariner transport had carried him on a great leg of the journey and how he returned to New York from the Southwest Pacific in less than five days.

Though all our efforts are bent to war, it is heartening for us to hear such stories. They impinge heavily on the public consciousness. How can anyone doubt that the world will draw heavily on the airplane in the heroic post-war task of reconstruction?

The Doubting Thomases who gaze gloomily to our expanded plants and swollen personnel rolls fail to note some significant facts. Already Congress is moving toward legislation to regulate and encourage the heavy new commercial traffic. It is already proposed that all first-class mail move by air. The airlines are petitioning daily for new franchises for routes never before covered and are planning for intensified traffic over existing routes. The Allied nations are already approaching the problem of international franchises and landing rights. All fields of business and industry are incorporating air shipping and travel in their post-war planning. The last traces of distrust of the air vehicle as a model of travel are disappearing as incredible stories come back from the war fronts—stories of our bombers returning from combat, terribly mangled from flak and machine-gun fire, yet landing their crews safely day after day.

The airlines, operating with worn-out equipment, will clamor loudly for airplanes at the end of the war. Part of the need will be answered for a short time by surplus military transports. But the aircraft industry already knows how to build more economical aircraft—aircraft with ton-mile and passenger-mile rates brought so low that they will be able to compete with ground transportation as never before.

We at Martin's are in especially good condition. We have excellent transport types immediately available. We have another excellent type available for specialized commercial service.

The Company has many other interesting plans for post-war, but they are being guarded closely. If the Government acts quickly and removes dangerous obstacles to a fast conversion, the aircraft industry will snap back quickly, and The Glenn L. Martin Company expects to be in the van.

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A PBM-3 Mariner which has seen months of hard service with the Fleet, stands by at Norfolk where it will soon be converted into a transport. Cargo hatches will replace gun turrets, bomb racks will come out to make room for additional fuel tanks, and the interior will be stripped of all but equipment vital to flight operation.

In the foreground is a newly converted Mariner transport ready to shove off for the Pacific to speed equipment and supplies to our fighting men at outlying island bases. In the background is a new Mariner patrol bomber ready to take the veteran's place on the combat front.

Official U. S. Navy photographs

Mariners Fly Over One Million Miles Carrying Vital Material To Warfronts

NOT a single man lost in nearly a million miles of overocean flying—such is the record of the PBM-3 Mariner with the Naval Air Transport Service. What makes this record even more remarkable is that it was not established by regular transport airplanes, but by converted patrol bombers which had seen many hours service on the U-boat front before being assigned to transport duty.

The story of the PBM-3 in transport service begins with a transport that was not a transport and a squadron that was not a squadron. A small group of Navy fliers—the nucleus of what was soon to become Squadron VR-10—was given two hastily converted Mariner patrol bombers and sent out to open up many thousand miles of aerial supply routes throughout the small islands of the Southwest Pacific.

Aerial Tramp Steamers

The success of this pioneering squadron is now a matter of record. These men and these airplanes had a job to do, and despite the adversity of the conditions, they did it without the loss of a single man. Hundreds of tons of vitally needed supplies were rushed to outlying bases. Engines, construction machinery, food, medicine, clothing, munitions, supplies and men were flown into Pacific islands many of which had never seen an airplane and seldom seen a boat larger than a fishing smack before the war. For some of these places the huge gull-winged flying boats formed the only supply contact with the outside world.

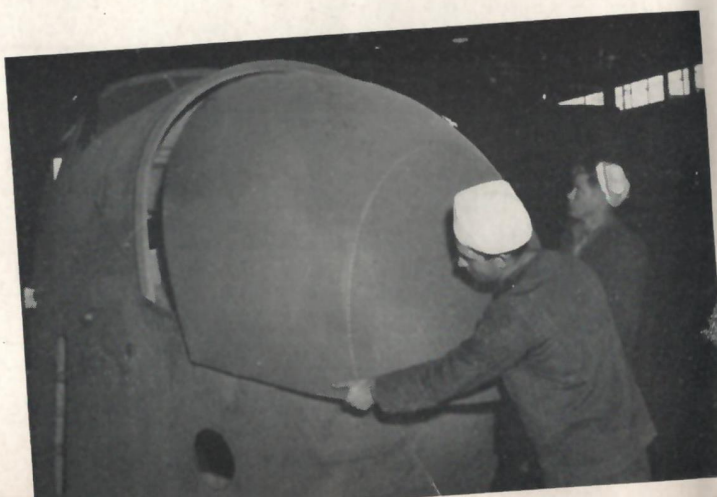
It was an aerial tramp steamer operation. There were no regular schedules. Supplies went where they were most needed when they were most needed. Generally the cargo to be transported far exceeded the capacity of the airplanes to transport it, but somehow or other VR-10 got it there even though it meant flying overloaded and putting in as much as 200 air hours per airplane per month.

The same thing applied to bases and landing facilities. There were no seadromes and beaching ramps. In many cases there weren't even harbors in which to land. The Mariners just had to sit down on the open water and rely on the ability of their compartmented hulls to stand the gaff. If the weather on one side of an island made landing impossible, the pilot generally managed to get in on the other side and deliver his cargo. Despite the primitive nature of the facilities and the fact that the PBM's often went for weeks at a time without being pulled up on the beach, the only airplane lost in the course of these operations was one that landed on an uncharted coral reef.

On Regular Schedule

That was a little over a year ago. Today that original group of pioneers has grown into one of the largest PBM operating squadrons in the Navy. A whole fleet

A wide cargo hatch through which aircraft engines and other war equipment can be loaded replaces the deck turret in the converted Mariner transport.



As the conversion process starts, the Mariner's nose turret is removed and replaced by a metal shell.

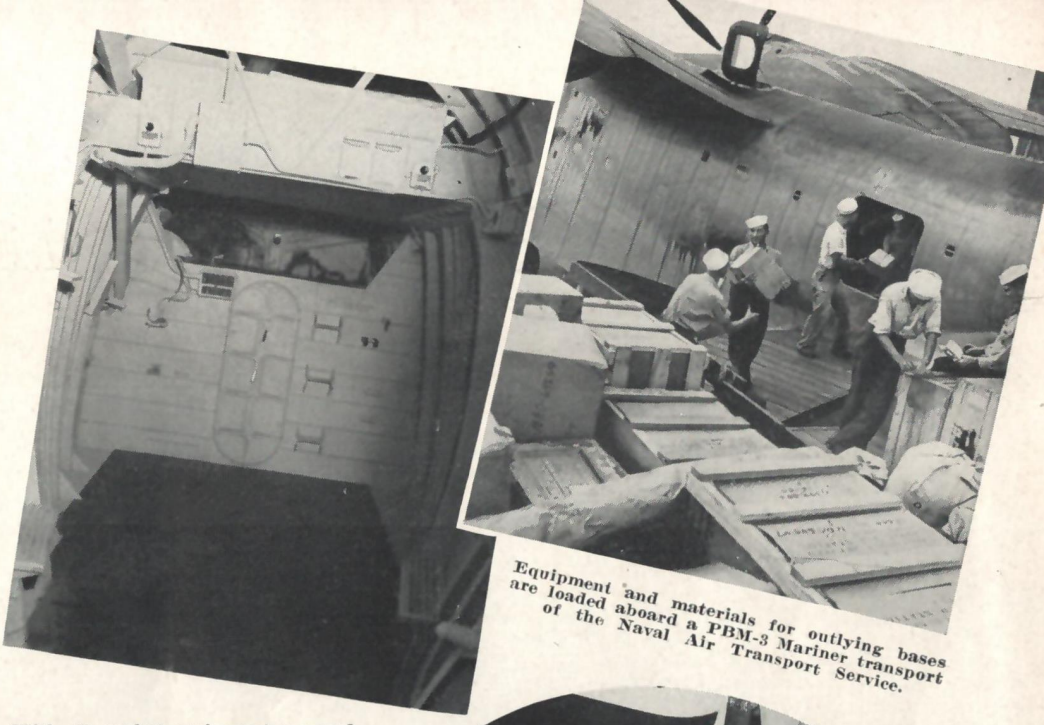
of gull-winged flying boats, converted according to the squadrons' own specifications by the Advanced Bases Aviation Training Unit in Norfolk, is carrying 4 to 4½ tons per airplane cargoes over distances up to 1,200 miles on regular schedule throughout the area pioneered by those first two Mariner transports.

The expansion of the PBM transport service has been made largely possible by the Navy's conversion program under which early model PBM-3's are being stripped of unessential equipment and rebuilt into transports as newer and deadlier Mariners replace them on the combat fronts. The success of this material conservation program and the ruggedness of the airplane itself are attested to by the fact that after months of combat service, only three of the first fifty PBM-3's were found to be beyond rehabilitation for transport duty.

Headquarters of the PBM-3 transport conversion program is the Advanced Bases Aviation Training Unit at Norfolk, Va., which takes the big flying boats as they come in from the Fleet. The first step in the transformation from patrol bomber to transport is the removal of guns and turrets and their replacement with broad, easily accessible cargo hatches. Next the inside of the ship is stripped of oxygen bottles, bomb racks, fighting gear, and every other fixture that can possibly be dispensed with. Just how complete a stripping job is done can be seen from the fact that they even remove one of the two steps leading down from the side hatches, and substitute one hose with a quickly interchangeable fitting for the three hoses in the fuel transfer compartment.

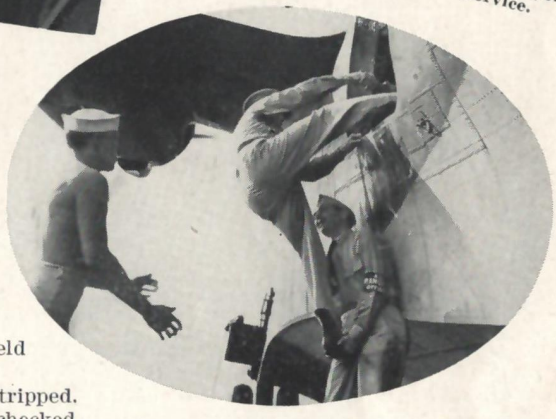
Thoroughly Overhauled

While one crew busies itself removing every ounce of non-essential weight from the airplane, another sets about the task of checking and reconditioning where necessary all working parts. Controls, control surfaces, flaps and leading edges are removed, checked and re-installed. Engines are overhauled. Cowlings and exhaust stacks are thoroughly gone over, and if a damaged part can possibly be made serviceable by reforming or welding, it is reformed or welded in order that the use of new materials, badly needed for the combat airplanes that are replacing these veterans, may be held to a minimum.



Equipment and materials for outlying bases are loaded aboard a PBM-3 Mariner transport of the Naval Air Transport Service.

With all combat equipment removed, the roomy hull of the big converted Mariner provides plenty of space. Where one step is now visible leading up to the port and starboard hatches, there were formerly two. The second was removed to cut down on weight.



Crew members climb aboard a fully loaded PBM-3 Mariner transport of the Naval Air Transport Service.

After the airplane has been stripped, and all working parts have been checked and, where necessary, repaired, the entire airplane is given a thorough cleaning, painted and equipped for its new duties. The nature of the equipment installed depends primarily on whether the conversion is for passenger or cargo transport. For the former 40 to 42 jump seats are installed providing for twice as many passengers as are carried by a standard DC-3 airliner.

For cargo transport interior fittings are held to a minimum, with every available cubic foot of space being provided for freight. Even the anchors are removed from the bow compartment and a sock capable of carrying 800 pounds installed in their place. As a result, the cargo Mariners, while retaining all the structural strength that made them stand out as patrol bombers, have been turned into one of the most efficient flying boats in the Naval Air Transport service, and are able to carry a useful load—crew, fuel and cargo—of ten tons.

Look Like New Airplanes

When the Mariner transports leave the ABATU base at Norfolk, all signs of battle scars have disappeared. They look like new airplanes, and according to the men who are flying them, they perform like new airplanes. Distances of nearly three thousand miles are constantly covered at an average cruising speed of 170 to 180 miles an hour, and on at least one occasion a PBM-3 transport averaged 198 miles per hour on a trip from Norfolk to the Pacific Coast on its way to the transport war zones. Overocean hops that would have warranted a Distinguished Flying Cross not so many months ago are an almost daily occurrence for these reincarnated flying boats and the men who fly them.

And above everything else, there is the record of VR-10, pioneer PBM-3 squadron of the Naval Air Transport Service, which took a couple of aerial tramp steamers and opened up a supply route that has played a vital part in the growing tide of Allied victories in the Southwest Pacific.

Reunion In New Guinea

Stanley L. Souders formerly worked in Body, John H. Bender in Tool Cribs. They knew each other well. Both went into the Army, the former winning his wings in the Air Corps, the latter becoming a member of an airdrome squadron. For months neither heard from the other nor knew his whereabouts until one night last November they ran into each other, face to face, in New Guinea. Well, you can imagine what happened, and no cracks, please, about this small world.

★ ★ ★

Ex-Caddy, Ex-Martineer, Is Home On Furlough

Staff Sgt. Eugene J. Remmell, former Production employee, returned home recently, a veteran of 25 missions as top turret gunner in a heavy bomber, to present to his mother his Distinguished Flying Cross and Air Medal. He has four enemy fighters to his credit. They were the ones that went to pieces in the air after a vital spot was hit. There were others that were hit and veered off smoking, but they are only "probables," according to Remmell.

He spent some of his furlough playing golf at Clifton Park, where he was caddy champion in 1940. In England he only had one opportunity to test his golfing skill.

Marauder Is Safest Bomber In Combat! Losses Lowest In 100 Mighty Missions

MARTIN B-26 Marauders completed their one hundredth mission over Western Europe from English bases with the lowest loss-in-combat record of any type bomber in that theater. These 100 missions, completed in five months since mid-July, represent a total of over 6,700 individual sorties with a loss of only 21 Marauders, or less than three-tenths of one per cent.

Of these only three were lost to Nazi fighters, while Marauders have shot down 31 confirmed Luftwaffe fighters, 19 probable victims and damaged 21 Nazi aircraft in aerial combat. On a great percentage of important missions there were no B-26 losses whatsoever.

Meanwhile, the Marauders were dropping a total of over 7,000 tons of bombs. These pulverizing raids were directed against the heart of the so-called invasion belt — that section of the continental coast nearest the English Channel. In short, it has been the first direct series of blows in the second-front invasion.

Raid Nazi Airfields

Seventy of the missions were against 28 Nazi airfields in Occupied France, Belgium and Holland. These included fighter bases such as Abbeville, St. Omer, Bernay, Tricqueville, Fort Rouge, Woensdrecht, Poix, Carpiquet-Caen, Lille-Vendeville, Bougainville, Beauvais-Tille, Lille-Nord, Evreux-Fauville, Conches Longuenesse, Haamstede, Amsterdam-Schipol, Beauvais-Niviller, St. Andre de L'Eure, Beaumont le Roger, Merville, Bryas Sud, Amiens-Glisy, and the Nazi bomber base at Montdidier.

Although capable of operating at a 300-mile radius, their greatest efficiency range of operations is 200 miles. At that range, Marauders pounded railway marshalling yards at St. Pol, Hazebrouck, Lille, Courtrai, Amiens and Serquex on twelve separate missions.

Other industrial targets were coke ovens on the Ghent Canal and at Zeebrugge; the shipyard at Le Trait; chemical works at Mazingarbe; power stations at Rouen; ammunition dumps at Hesdin; coastal defenses with their 16-inch gun emplacements at Boulogne, and the Calais military installations.

Major Gen. Frederick L. Anderson, commanding general of the Eighth United States Bomber Command, declared that the low-loss record was "astonishing" and added:

"It proves that these planes are ready for whatever tasks may be assigned to them in the future."

Brigadier Gen. Samuel E. Anderson, commanding general of the medium bombardment wing of the Eighth USAAF, asserted:

"The successful completion of 100 missions against enemy targets in France, Holland and Belgium over a period of five months has been an invaluable prelude to the all-important second hundred. The experience gained by combat crews and the destruction of Nazi installations by consistently accurate pin-point bombing permits us to face the future confident that we may fulfill any assignments against any objective."

Cracked Line Open

The Luftwaffe long ago had organized a fighter wall within the coast line of the invasion belt with bomber fields further back. The cracking of this wall has been the special assignment for the Marauders —and they have cracked it wide open. They have penetrated it to within a few miles of Paris, hammering Le Bourget airdrome.

Behind this great achievement, which presages greater accomplishments in the coming year, is a dramatic story—one of hardships and handicaps, a discouraging setback early in the game, but one of eventual and overwhelming success.

Two low-level missions were attempted in May over Velsen, Holland. The first was successful and all Marauders returned. In the second mission at tree-top level, by an unfortunate freak which cost the element of surprise, disastrous casualties for the experimental B-26 flight occurred. As a result the Marauders went under wraps for two months, devoting time to specialized training.

On a fine summer afternoon in July, the Marauders roared out over the Channel at medium altitude of 12,000 feet—the altitude for which the B-26 is primarily designed — and headed for Abbeville. They had fighter escort. An hour later they returned — all safe at home plate.

Successful Experiment

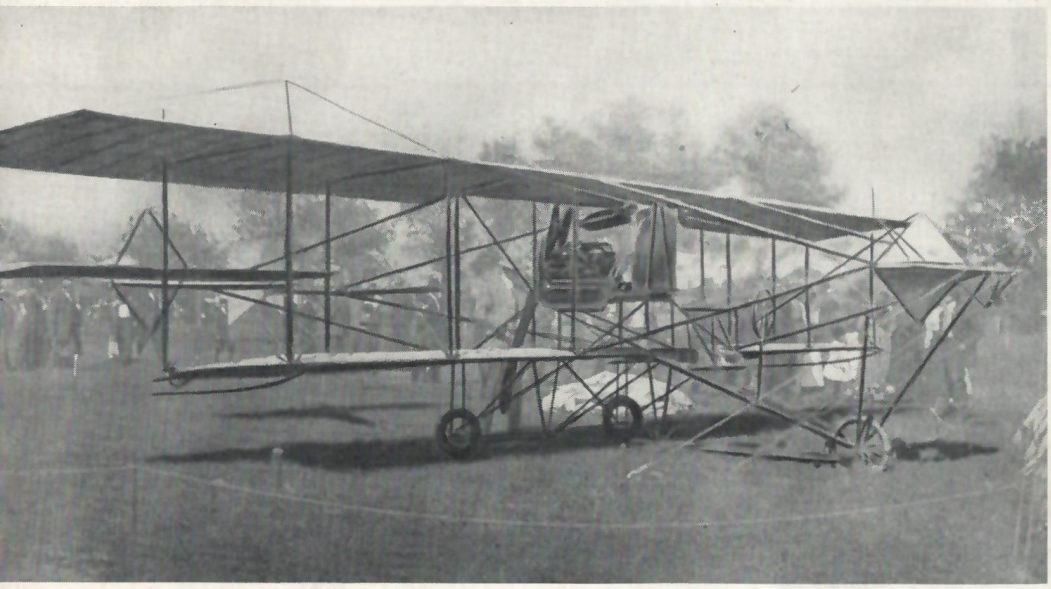
The experiment was a success. Those who had cried out in doubt against the value of the medium bomber at any altitude in the European Theater were temporarily silenced. The next five months silenced their doubts permanently.

For excepting those days of extremely bad weather, and there were many of them in England, especially in October and November, Marauders were roaring over Fortress Europe on every possible flying day. Sometimes they went out in groups of as many as 200 per day.

One of the outstanding missions occurred August 4, when a particularly well-handled job of precision bombing took place against Le Trait shipyards. A fairly small formation of B-26's placed their bombs in a target area 330 by 650 yards and almost completely destroyed it. Hits were also scored on a submarine and a tanker in the slips.

The biggest day of operations came in the coordinated amphibious exercises in the English Channel against Boulogne, where 16-inch guns were emplaced. Every fifteen minutes for two hours Marauders

(*Continued on page* 16)



An old, faded, cracked picture was recently received by Glenn L. Martin from Mrs. Gertrude Parker Allen of Seneca, Kansas, which revived memories of 30 years ago when Mr. Martin visited there in one of his earliest planes. The picture is reproduced at the left. Even in those days, the Martin plane was attracting attention, as witness the crowds in the background, just as Martin planes today are attracting favorable attention on every warfront.

—Official U. S. Navy Photos.

The Mars takes off from its Patuxent (Md.) base on the historic flight to Natal.

Mars Flies World's Heaviest Air Cargo

(On December 10, 1943 Secretary of the Navy Frank Knox revealed that the 70-ton Martin Mars on its first war mission for the Naval Air Transport Service had shattered all existing records for cargo transportation and over-water flight. The following is an eye-witness account of the events preceding and during this historic trip prepared by Lieutenant (jg) Leon W. Shloss, U.S.N.R., the security and liaison officer assigned to the flight.)

WHEN Vice Admiral John S. McCain, U.S.N., Deputy Chief of Naval Operations (Air), directed Captain Donald Smith, U.S.N., head of the Naval Air Transport Service, to put the Mars into immediate service "to prove whether the type can really haul materiel to and from the war fronts in quantity," and the order to ready the huge flying boat for a flight to begin just three days later reached headquarters of Naval Air Transport Squadron Eight at Patuxent River, there was some consternation. Officers and men were momentarily taken aback at the size of the job confronting them. But there was no word of complaint, or of doubt. This crew is intensely devoted to the Mars, quietly resents those who have criticized or belittled the big boat. Without being overly aggressive, every one of them has his chin stuck out for the "Old Lady," as they call the four-engine giantess.

It is Friday, November 26. The flight is to begin on Tuesday, November 30. Lieutenant Commander William E. "Bill" Coney, U.S.N.R., of Baltimore, Maryland—known as the "Skipper" to every man aboard—whose special ward the Mars has been for a long time, deals out the orders, and the work is on. Lieutenants (junior grade) Ronald A. Dumont, U.S.N.R., and James N. Hamilton, U.S.N.R., engineers, hurry off to The Glenn L. Martin factory to enlist the Company in the preparatory effort.

Make Thorough Overhaul

At Patuxent the mechs go to work tearing down the engines for inspection, going over every inch of the electrical system, checking the vast entirety of the Mars to put it into perfect shape.

Saturday, Sunday, Monday pass. Weary-eyed, stiff-limbed, officers and men hang tenaciously to the task of getting the Mars ready. Monday night, the temperature drops to 25 above. About 10 p.m. it begins to snow. The bitter wind sings across the water, numbs hands, faces, feet. Takeoff is only five hours away.

"Okay, says the Skipper, who has come from a pre-flight meeting with the pilots, navigators and station aerologer. "Let's get some sleep. Back here at 7:30."

That pre-flight meeting had been serious. No one had any illusions about the project at hand. Nothing like it has ever been done before. The Skipper knows that it is 4,375 miles to Natal and that he and his crew and the "Old Lady" are going to try to do it nonstop—all the way. It will be record-shattering, if they make it. It will be the longest nonstop over-water hop in history, the longest nonstop cargo flight in history. It will be a lot of other "longests" and "greatests" and "firsts"—if they make it.

Christmas Mail Loaded

Morning—7:30—is as bleak and cold as was the night before, but the sun is making a game effort to shine. Down on the slanting, concrete seaplane ramp the Skipper and his crew scramble into a barge. Their gear already has been loaded. So has the Christmas mail—13,000 pounds of it for the boys. The Mars is loaded to 148,500 pounds, the greatest load in aircraft history. As the Skipper taxies out into the Patuxent River, all hands take their stations.

The Mars is the first, two-deck aircraft on which both decks extend the full length of the ship. The flight deck 30 by 12 feet, is topside and forward. In the pilot's seat is Lieutenant Commander Coney. Co-pilot is Lieutenant Joseph A. "Joe" Baker, U.S.N.R. Lieutenant Kenneth W. "Ken" Winsor, U.S.N.R., is standby pilot. A few feet aft, on the starbound side, sits Radioman Bowman. Across from him, over the three-by-seven-foot navigators' table, are Lieutenant L.

(*Continued on page* 17)

Marauders ranging over enemy targets in Europe.

The Lady Is Defended

The following dispatch was printed in a recent issue of "Stars and Stripes," Army publication in England.

A MEDIUM BOMBER STATION, Oct. 24—In defense of a much maligned lady—the Marauder.

This Sabbath noon, something more than two miles over the big Nazi airdrome at Montdidier, in France, scores of these much maligned girls of the American Air Force fought and beat off the strongest attack the Luftwaffe has yet made on U. S. medium bombers in this theater.

So I went out with a Marauder gal called Idiot's Delight. Not looking to be shot up, mind you, but ready to test the gal's morals if we did get shot up. We did. And the lady has been much maligned.

A 20mm. cannon shell burst in our port engine, smashed a magneto, blasted away the air intake, left sheets of torn metal whipping in the slipstream, ruined the propeller pitch controls and did a lot of other minor damage.

Another 20mm. ripped through the tail, splattered the gunners, gouged out control surfaces. Other shells came through the fuselage, smashed the glass above the bombardier and that next to the pilot, put the radio out of commission, ruined the fuel pump system.

Idiot's Delight got home, though.

And half a dozen other ships from the field were shot up as badly, while virtually half of the Marauders which took off with this group, commanded by Col. Glenn C. Nye, of Raleigh, N. C., were battle-scarred and torn. But they all made their bombing runs, putting the Luftwaffe base at Montdidier out of whack for a while.

Now lots of Fortresses have been shot up worse than Idiot's Delight. And lots of them worse than Hank's Yank, who was sneaking around with a live bomb—a big one—loose in her bomb bay. But a Fort has four engines. And everybody admits that a Fort is a tough airplane. The point is, they said the Marauders couldn't take it. The story simply tries to show that they can take it, and do.

"Whitey" Sterngold, one-time backfield star for Lehigh (in the records he is 1/Lt. M. I. Sterngold, of Lawrence, L. I., N. Y.) hoisted Idiot's Delight off the runways a couple of hours before lunch time today.

It was good to see the Spitfires join us at the Channel, because last night the Spit pilots were our guests at a thank-you-party here.

Country Was Quiet

France was deceptively quiet on the way in, and it looked as if the Lady wouldn't get the chance to say yes or no on a question of morals as our bomb bay doors opened.

Then, in a fury of 20mm. shells, the villain made seductive passes and the girl struggled for her honor.

"Fighters coming in at 12 o'clock," said Whitey.

"More of them coming in," said Rube Thompson.

"Rick" Rueggsegger's turret guns began to boom, Sam Davis' waist gun chipped in, and then came the hammer of Otis Crookham's tail gun. Silver and black Focke-Wulfs raced through the entire formation. They had seen the bomb bay doors open apparently, and were going to break up the bombing run. Every B-26 was firing, but not one changed course on that bomb run. Flak came up and burst below the open bomb bay doors of Idiot's Delight.

Whitey and Rube held the lady straight on. There was the sharp noise of a 20mm. hitting the port engine. Glass splintered onto Whitey, and onto Bill Morrill as he crouched over the bomb sight. Another 20mm. hit the base of the tail fin, then onto Crookham's helmet and bored holes in his parachute. Another shell swept through the fuselage, splattering Rick's top turret. A shell whizzed a couple of inches past Sam Davis' nose and gouged hunks out of the metal framework.

Idiot's Delight and all the rest of the gals swept onto the target like the most virtuous ladies on a Sunday promenade.

"Bombs away," Bill Morrill sang out, and then we went away from that place in a hurry.

Meanwhile, the villain was still making passes at the heroine's rear, and it was long ways back to the old homestead. The RAF hero was doing a terrific job in escort, but there were a lot of villains.

Sailed Right On

Smoke plumed back from a couple of planes in the group, but they held on to formation. There were plenty of torn wing surfaces on either side of us, but those ships which "couldn't fly with their wings shot up" sailed right on.

Our own situation was about like many others. With the coast of England in sight, the warning red light blinked on above the gas gauges. Twenty minutes of gasoline left. We couldn't adjust the pitch of the propeller. The works were shot away.

(Yet they had said they couldn't fly if something happened to one power plant.)

Sam Davis got a direction on the emergency radio equipment. Rick nursed the engine. Whitey headed her away from formation and straight for base. At the field another plane, shot up, had landed off the runway. Controls said for us to keep flying around.

"All right," said Rube Thompson softly over the radio. "But we're awful near out of gas. And we got an engine awful near shot up." He paused, and added, even more softly, "You'd better hurry."

So with no flaps, no control over his prop, Whitey headed in. We stopped just off the runway. (Remember: They said the Marauder couldn't land safely if it had trouble, and not very safely in the best of shape.)

So the villain was foiled; the hero done noble and the little gal saved her virtue.

Next week, East Lynn.

A Marauder drops a stick of bombs over enemy territory.

Tail Turret Tales

THE group of skeptical crewmen walked around the plane, carefully examined the new arrival as it stood silhouetted against the bright English sky. It was a Marauder, all right—they were sure of that—but just what was that new "blister business" back by the tail-end of the fuselage? There wasn't any doubt about the "business," it was there in the form of two ugly looking fifty calibre machine guns projecting from the new transparent spherical turret. It looked good, to be sure, but like the gentlemen from Missouri, the boys wanted to be shown.

Obviously the new turret was for the tail gunners. Until this time those boys who bounce around at the end of a B-26 while managing to retain both their breakfast and their eagle-eye, had performed their work from "balcony seats," perched in a sort of "bay window," equipped with two manually operated tail guns. But the "bay window," good as it was, had certain visual limitations in battle which the new turret eliminated. The new development had moved the tail-gunners from the "balcony" to the "box seats."

These turrets had come as a complete surprise to the combat crews and ground personnel but the U. S. Air Force wasn't long in getting the new planes into the field of operations. Fortunately, the Martin armament specialist was thoroughly familiar with their operation and maintenance. Before the series of instruction lectures and instruction sessions were completed, the boys were waxing enthusiastic about this efficient "stinger" which had been added to the Marauder's tail.

This happened several months ago. Since that time there have been hundreds of reports from the Marauder stations concerning the extra "battle power" of the new turret. Typical of these was one from T/Sgt. Edward H. Kahl of Elgin, Ill., tail gunner of the "Black Magic," in claiming one M. E. 109 destroyed.

Came From Rear

"He came in on us directly from the rear at our level," Kahl reported. "I fired four or five bursts starting at three hundred yards and breaking off at about ten yards when he went into a dive. I could see my tracers pouring into his engine and fusilage as he started down and flame and smoke was streaming from his fusilage."

Another kill was claimed by S/Sgt. Myron O. McKim of Milmont Park, Pa., tail gunner on "Miss Pat" who said, "An F. W. 190 came in from our rear. I gave him one burst at about 75 yards and could see my hits take effect right away. He lifted on one wing and slipped off into a dive. The last I saw of him he was going down in flames."

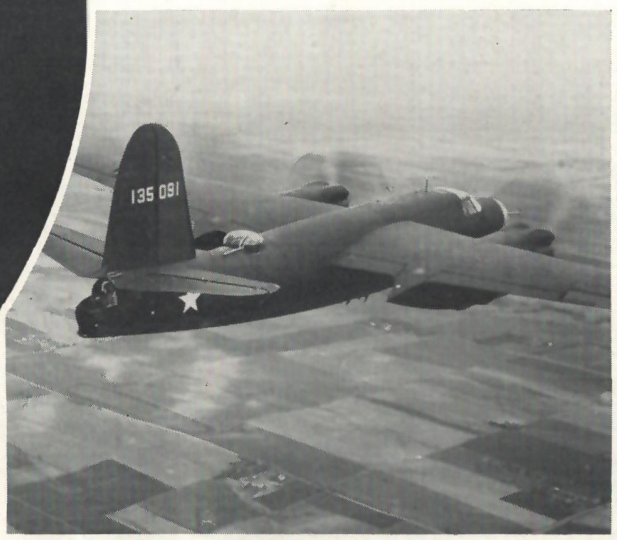
This new turret is another one of the exceptional improvements which Martin engineers have developed in making the Marauders the outstanding "battle ships" they are. If there's a single existent doubt about the B-26's ability to "take it," the following reports from the "flak and fighter" areas ought to dispel it:

Major Gove C. Celie, piloting the Marauder, "Miss Lois Jean" in a daring low-level raid on a power station in Holland, brought the ship home solely on the train tabs. The plane got back to England, however, only to have the crew members find that the hydraulic system had been severely damaged and the landing gear would not go down. The crew prepared to bail out but S/Sgt. Claude T. Cook of Leesville, La., the engineer straddled the catwalk over the bomb bay and worked on the leaks in the system until he finally succeeded in putting enough fluid into the emergency reservoir to operate the gear. On the route back from Holland Navigator Jack Tyson informed the pilot that he was ten degrees off course. Major Celie gave the wheel a twist and it spun around like a top. "That's the best I can do for you," he said, but in spite of this the B-26 brought the crew down safely.

During another raid "the electrical sys-

(*Continued on page* 18)

Chuck Burns (on the left) and Larry Ball (right) use flood and spot lights for still pictures.



Aero-photography is just one of the many departmental activities.

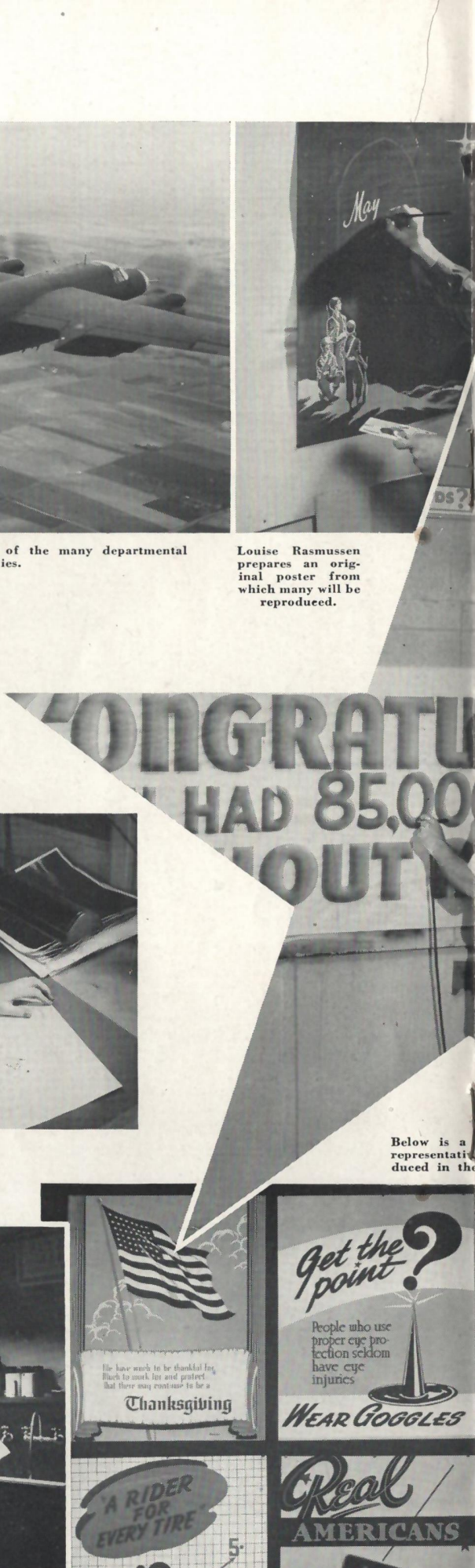
Louise Rasmussen prepares an original poster from which many will be reproduced.

Air brushing is used in many types of art work. Chet Madden shows how it's done.

Doug Wall works on illustrative cartoons for booklets and publications.

Paul Faulkner puts up one of the many "baby" bulletins in strategic spots on the reservation, conveying messages and slogans.

Claude McCullough and Antoinette Benal don't need smoked glasses in the dark room. They can enlarge 8 by 10 negatives to 10 by 40 inches.

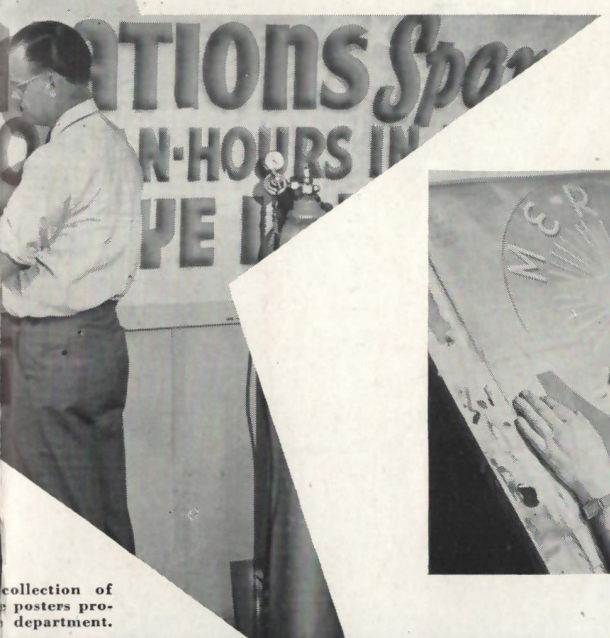


Below is a representati duced in th

Marvin Hudleson gets a picture of Glenn McCord, Industrial Relations, while Jack Lee of Public Relations gets the story for plant publications.

Harvey Jones changes one of the samples of large posters and graphs used to illustrate plant activities.

W. K. Swanson puts the finishing touches on a large banner. Similar ones are hung to stimulate personnel interest in various activities.



collection of posters pro- department.

Some of the illustrations are done in oil. Paul Faulkner touches up the background on a B-26.

Jim Pape cuts a silk screen stencil. These are used in quantity reproduction.

Hundreds of posters are reproduced by the silk screen method. Clyde Meredith shows one of the steps.

Jean Knight and Clare Harder work on the light table. Negatives are dated and numbered, then prepared for printing. Mimeograph stencils are cut and picture slides bound here also.

Pointing with pride to the comparative efficiency of the three shifts of the Machine Shop in Modification is D. A. Kendall, Chief Industrial Engineer at the Modification Center. Shift Foremen Wesley Woods, Lyie Mincer and John Collins take note of the efforts of their respective groups.

Visual Methods Used to Keep Tab on Departmental Efficiency

Production is being speeded up in Machine and Sheet Metal in Modification by the use of visual charts showing the operating effectiveness of each of the three shifts. Workers find the relative efficiency of themselves and their fellow Martineers for the preceding day shown clearly each morning in percentages prominently displayed.

Taking the maximum (100 per cent efficient) as a standard, the productive efforts of each worker on a shift are tabulated daily by Industrial Engineers at Modification, under the direction of D. A. Kendall. The total of all individuals is then compiled and a daily grand total of efficiency is thus determined.

The system is proving effective and it is planned to extend the program to other Modification departments.

As Industrial Engineering is the practical plan to produce greater quantities of quality products in the least time, making the best use of manpower, machines and materials, the effectiveness of the plan hinges upon a thorough and detailed study of the efforts of each worker.

The steps in determining the efficiency of each individual follow definite procedure. First, a time study of each individual operation is taken with a stop watch to determine a budgeted time for the operation. Or, in other words, the time that it should take the average trained operator, using the proper method and expending normal effort to produce the part. This figure determines the standard of 100 per cent efficiency. Secondly, the worker is given a daily work card upon which he records the number of parts made in the given time-period at the machine. These cards are collected and totaled daily. The third step consists in the tabulation of the number of pieces made by each worker and a comparison of these actual time-figures with the budgeted time established in the first step of the study. So, if John Smith made but 30 parts in one-half hour and the time-study table showed that, working at 100 per cent labor effectiveness, he should have made 60, his efficiency has been but 50 per cent. In the fourth step, the efficiency totals of all workers on any given shift are compiled and compared with the standard or budgeted time totals. Thus, the efficiency of the entire shift is determined. These figures are recapitulated weekly from daily reports. In this way, the department can keep tab on the actual efficiency of each Martineer working at each particular machine.

Industrial Engineering as it operates at the Martin-Nebraska Modification Center depends upon the work of five departments. These departments and the supervisors cooperating under Kendall and J. N. Troutman include: Labor Statistics, Robert Dolan; Time Study, H. W. Smith; Planning, (including form control, SPI coordination and procedure analysis) J. F. Schlott; Methods, K. D. Erwin, and Education, Dr. E. P. Marx.

STORK DEPARTMENT

★ To Mr. and Mrs. Jasper Burt (Asst. Fact. Supt.) a girl, Nov. 11. ★ To Mr. and Mrs. Jack Martin (Assembly) a boy, Nov. 22. ★ To Mr. and Mrs. Dwight Fowles (Protection) a boy, Nov. 11. ★ To Mr. and Mrs. Leo GeBauer (Laboratory) a boy, Nov. 1. ★ To Mr. and Mrs. Lawrence E. Knowski (Wing Section) a boy, Nov. 18. ★ To Mr. and Mrs. George C. Miller (Final Assembly) a girl, Nov. 16. ★ To Mr. and Mrs. Aaron Reed (Mod. Final Assembly), a boy, Nov. 10. ★ To Mr. and Mrs. Everett Johnson (Assembly Inspection), a girl, No. 12. ★ To Mr. and Mrs. Morris Franklin (Production), a girl, Nov. 9. ★ To Mr. and Mrs. Robert Smith (Tool Room), a girl, Nov. 7. ★ To Mr. and Mrs. Ernest Sheets (Center Section) a boy, Nov. 16. ★ To Mr. and Mrs. Earl Moats (Ground Test) a boy, Oct. 29. ★ To Mr. and Mrs. Paul Carrico (Flight Section) a boy, Oct. 18. ★ To Mr. and Mrs. Sebastino Russo (Spares Depot) a boy, Nov. 10. ★ To Mr. and Mrs. Ralph Schweizer (Heat Treat) a girl, Oct. 22. ★ To Mr. and Mrs. Bob Shields (Assembly) a boy, Nov. 26. ★ To Mr. and Mrs. Robert C. Shields (Modification Assembly) a boy, Nov. 26. ★ To Mr. and Mrs. Rudolph Duda (Ground Test) a boy, Nov. 6. ★ To Mr. and Mrs. Arthur Carroll (Ground Test) a girl, Nov. 29.

Orange Blossoms

★ Llyeen Craig (Finishing & Plating) to LaVere Hergott (Sheet Metal) No. 6. ★ Carol North (Surfaces) to William Brantz (Sheet Metal) Nov. 7. ★ Donna Anderson (Operations) to Lt. Robert M. Knapp, Oct. 9. ★ Irene Anthes (Plant & Equip., Mod.) to Warren Rhylander (Production) Nov. 12. ★ Beatrice Beranek (Public Relations) to Lt. Col. B. H. Warren, Dec. 18. ★ Hazel Mincey (Nose Section) to Earl L. Mather (Machine Shop) Nov. 20. ★ Maxine Sorenson (Small Parts) to Benjamin Czapla (Final Assembly), Oct. 14. ★ Jane Augustine (Mod. Timekeeping) to Howard Johnson (Mod. Assembly), Sept. 25.

Last September, a B-25 crashed through the roof of the main assembly plant at Martin-Nebraska. Three men who were on board the ship were killed; a fourth, Thomas Paul Zinkevich, Armament, Modification, was hurled through the wreckage to the floor below. Rushed to the hospital at near-by Fort Crook, Tom was given little chance to survive the serious injuries sustained in the accident. Days later, the attending physicians decided he had a better-than-fighting chance to pull through. Recently returned to his home from the hospital, the first thing young Zinkevich wanted to do was to visit with his friends at the plant. Accompanied by his wife, Anisia, who until the time of the crash worked in Production, Zinkevich toured his old stamping grounds. In the picture to the left, above, fellow Martineers welcomed him back. To the right he is seen surrounded by those who worked with him in Armament.

Baton-Weilder de Luxe Is Former Soldier, Now Martineer

A lot of brass hats in the stands makes no difference to Joe Blazo, drum major and baton-twirler de luxe, when he's performing on a drill field. They're just part of the audience to Joe, who has been known to toss the baton 35 feet in the air upon occasion. This was during the first of his two hitches with the U. S. Army. He now is in Tool Room, third shift, having worked here since April.

JOE BLAZO

Joe's first hitch was from 1935 to 1937 with the 27th Infantry Band in Hawaii as drum major. He plays the clarinet and saxophone and broke into the band business one day in Hawaii when the regimental band turned up without a drum major. Joe had had some experience twirling a baton and took the job.

With plenty of practice after hours he became so proficient that he could make an average toss of fifteen feet. Once when the gold braid was much in evidence, Joe extended himself to a 35-foot toss.

"While it was up in the air, it looked so far away I kept thinking that if I miss this I'll be a bum," Joe explained. But he caught and established a record.

Joe has plans for organizing a band. Because of the scarcity of woodwinds, he is now playing a clarinet.

★ ★ ★

Flyers Given Aid By Portable Radio

A portable radio station operated high on the craggy sides of a Tunisian mountain by eight enlisted men of the U. S. Army Air Forces, served as a vital beacon to damaged Allied planes during the crucial and final phases of the campaign in North Africa.

★ ★ ★

Husband and Four Brothers in Service

To Mabel Kinsey, first shift Surfaces, and a Martin-Nebraskan for over a year and a half, the progress of the war in more than one theater is of paramount interest. The reasons are these: her husband, Pfc. Harold P. Kinsey, is in the Aleutians (she believes); Brother George Thornton is a prisoner of the Japs in a Philippine internment camp, and three other brothers, Carl, Wesley and Leo, are in the Navy.

George, who is 21, was taken prisoner while serving in the Army in May, 1942. The family has had just one card from him. The official notices of his capture came through the Red Cross. He had received his army training in the Philippines.

Carl, who is 30, joined the Navy in January, 1942, and is a petty officer and cook. Wesley, 28, in the Navy for seven months is a petty officer in gunnery. Leo, who joined the Navy with his brother is only 20 and is second-class seaman. Leo and Wesley have seen action in the South Pacific while Carl saw his in the Atlantic.

Harold, Mabel's husband, in the army fourteen months, has been overseas for six.

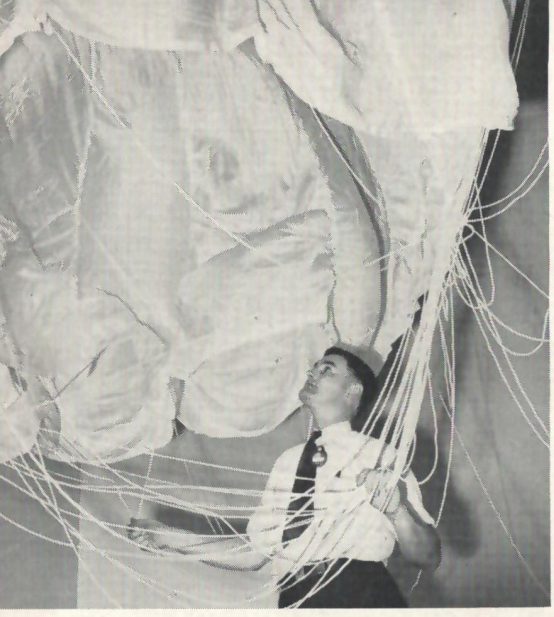
Joanna Franco and Mariam Dillingham, left and right, have just been discussing some of the information they received from the office of Jacqueline Cochran, famous woman flier now in charge of the WASPS.

Martinettes Plan To Become WASPS

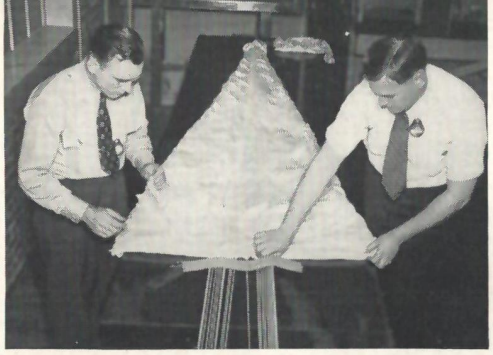
The Women's Air Force Service Pilots (WASP) will have two Martineers among their ranks one of these days, if Mariam Dillingham (Building & Field) and Joanna Franco (Plant & Equipment) have their way.

These two young ladies are attending night school twice a week, studying the theory of flight (Navigation and Meteorology to you), and are also taking a course in the general servicing and structure of aircraft at the University of Omaha. Sunday mornings, they can be found at the municipal airport, wings sprouting, taking flying lessons.

This pre-ground test group at Camouflage, first shift, has worked as a team for about ten months at the Nebraska plant. Left to right are Richard Graham, Albert Lucas (leader), Leonard Turner, Conwood Thomas, Dave Alexander. Behind them is Winfield Raglin and on top of the ladder is Eugene Griggs. Raglin left for the army recently, thereby breaking up the group for the first time.



A. A. Robinson separates the suspension lines while the parachute hangs in the well for 24 hours while the chute is "dried out." An electric fan keeps it blown open so that all creases are "aired" out.



Robinson and Briscoe work hand in hand as they re-pack the 'chute. Trailing at the end is the "pilot's chute" which opens before the big chute does.

A parachute is fitted to the wearer and here Robinson on the left and Briscoe on the right fit Wm. A. Miller, company test pilot, to his chute.

Parachutes Are Temperamental, Say Riggers

In one of the finest equipped parachute lofts in this part of the country, A. A. Robinson and Ben "Wolf" Briscoe, the Martin - Nebraska parachute riggers, handle the chutes for the boys who wear 'em.

These soft-voiced fellows from the south (Robinson from Gainesville, Georgia, and Briscoe from Monroe, Georgia) are tremendously liked and admired by the personnel of the Hotel De Gink. Prior to their employment at Martin-Nebraska, they were employed by the Northern Oklahoma Flying Service at Blackwell, Oklahoma, to which they went after completing their riggers' course at the University of Georgia.

According to an individual's ability, it takes from three to four months to acquire a parachute technician's certificate —the training period takes longer. Any licensed school or instructor can give the training needed, and then it is necessary to pass three examinations to obtain a license.

A parachute, according to the two Southerners, is a cross between a prima donna and a spoiled brat—it is both temperamental and delicate. There can be no errors in the rigging of parachutes. Every precaution against mistakes is taken, and each step of the packing operation is checked and rechecked. Inclusive of packing, repair work and maintenance, Robinson and Briscoe are able to handle approximately 20 parachutes a week.

The chutes are inspected every ten days. Every sixty days they are repacked, and if need be, repaired. Before a chute is repacked, it hangs in a drying well for 24 hours and is thoroughly aired to prevent decomposition or weakening of the material therein. A table, 45 feet long and 3 feet wide is used for inspection and packing. A sewing machine, cleaning fluid, and a complete stock of repair parts enable them to virtually rebuild any parachute.

Should the functioning of a chute be doubted for any reason whatsoever, the chute is drop-tested. "Oscar," a dummy whose shape vaguely resembles a human, is dropped from a plane. The resultant action of the chute clarifies any doubts as to its safety.

With each 'chute packed, a slip is inserted giving the date of packing, the inspectors name and license number. This is their "guarantee" that the pilot can depend on his 'chute in case of an emergency.

Robinson and Briscoe are licensed and thereby qualified to pack any type of 'chute for either civilian or army use. Here at Martin-Nebraska, they handle all 'chutes used by our flight personnel and by Army flight personnel. Both men have been riggers for over a year.

Both come from towns only forty miles apart, and did not, as it happened, know each other except by hearsay because of the nature of their work. Robinson, who of the two came to Martin-Nebraska first in April, 1943, heard about Ben's parachute rigging prowess through his own school, and the fact that he was working nearby at Pittsburg, Kansas. Robinson sent for Ben to work here, and it was then they discovered they had met through some business transaction but had entirely forgotten the incident. Needless to say, Robinson is most happy to have Ben as his assistant.

Ben Briscoe and A. A. Robinson separate and line up the layers of silk, preparatory to the folding on the 45 foot long table. Sand weights keep the suspension lines flat on the table.

Last steps of packing involve Robinson's tacking the bag together with Briscoe holding the pilot's chute free from the rest. By working together, the chute is packed uniformly and more quickly.

Family All Out For War Effort

The Obradovich family, of which Raymond, third shift spray painter in Finishing and Plating at Martin-Nebraska, is head, is well represented in the armed forces with four boys in different branches of the service.

Robert is in the Artillery as an instructor in a school in Oregon. He entered the service in September, 1942. Nick went in several months ago and is attending a Navy Air school in Idaho.

Two boys, George and Mike, are home recuperating from injuries received in service. George was injured in a tank accident at Camp Knox, Kentucky, and Mike, of the Coast Guard, who had served a year and nine months, was sent home after his ship was blown up in January, 1943. Mike was in the water for more than two hours before being rescued.

Not to be outdone by the male members of the family, Mildred, the boys' sister, works on motors in Final Assembly, third shift. Four other children are at home. Raymond has been a Martin-Nebraskan for some time.

Martineer's Blind Son Enjoys Visiting Plant

One of the most interested visitors to the Glenn L. Martin-Nebraska Company in the past few weeks was Oren Bradshaw of Ada, Oklahoma, who was personally conducted through the plant by one of the plant officials.

Notwithstanding the fact that Oren has been blind for years, he didn't miss a thing, feeling and hearing everything that went on around him. He touched everything and climbed in and out of ships, and all in all enjoyed himself thoroughly.

Oren is the son of Mr. and Mrs. Cecil Bradshaw who are first shifters in Camouflage and Blue Print Files. Oren and his wife were visiting his parents here in Omaha.

★ ★ ★

Marauder Performances Praised By Ground Crew

"Two crew members dead—the pilot, co-pilot and all but one crew member wounded—landing gear shot away—one motor gone—still the Martin Marauder came ploughing home for the last 140 miles on one engine to make a belly-landing with the wounded co-pilot at the controls."

Such are the facts concerning the crew of one B26 that refused to say "Uncle" and returned to its base from a raid over enemy territory. These facts were related by T/Sgt. Ernest E. Deaton in letters to his father, John R. Deaton, first shift Spares, Martin-Nebraska.

Sgt. Deaton, an electrical mechanic in charge of a ground repair crew somewhere in Italy, is high in his praise of the B-26 and is able to tell his father of many similar instances that he and his crew witness relative to the superlative performances the Marauders are putting out.

T/Sgt. Ernest E. Deaton, son of John R. Deaton, Spares Dept. at Martin-Nebraska, praises the B-26s that he and his ground repair crew welcome back to home base.

Graduates of Martin-Nebraska's Machine Shop classes are shown in the upper picture working the turret lathes for which they were trained. In the lower picture, graduates are shown doing a good job on the drill presses.

Women Graduates Take Over Machines

Machine Shop classes for women which started at Martin-Nebraska several weeks ago, are beginning to prove their worth and show concrete results. Of the 26 women who attended the first class, 22 completed the course and are now employed in the Machine Shop on second shift. Six of the women are working in the turret lathe department on the smaller machines with favorable results; seven of the original class are employed as helpers on the milling machines; six are operating drill presses. The remainder of the graduates are doing bench work until such a time as they may be needed on the machines.

Two other classes in machine shop work have been started since the first group graduated. These courses are in line with the machine shop policy to train women on specific machines and then hold them in reserve to fill whatever may occur in the future. The age-old belief that women did not have sufficient mechanical aptitude to become satisfactory machine operators definitely has been proved a fallacy. The women recently graduated, today are becoming competent operators. Since male replacements are becoming more difficult to find, these women graduates of the Machine Shop classes will be called upon to fill the gaps when they occur.

Cecil Mittlestadt, classroom instructor, and the machine operators in the department are credited with the training of the women. O. B. Harms, Machine Shop foreman on the second shift, directs their shop work.

It's Your Job And Mine

We all take pride in our home and how they appear. None of us would relish living in a home with the floor littered with papers, bottle caps, cigarette stubs on the floor, open a pop bottle and let the cap fall where it may, unwrap a sandwich and drop the paper on the floor to let it be, it wouldn't be long before our homes would be unlivable.

All this leads up to one thought. Let's take the same pride in our working surroundings that we do in our homes. Use the receptacles placed there to deposit refuse, the buckets for cigarette stubs, etc., and help keep the surroundings clean.

Our Janitor Department is striving to maintain a clean orderly place in which to work. We know we have an efficient and hard working department whose members take pride in doing a good job of "housekeeping," but they need your cooperation.

Marauders

(*Continued from page 6*)

hammered the gun positions. None of the landing craft in the exercises were fired upon. One photo showed 42 bomb craters in one gun emplacement.

Drove Germans Crazy

By the end of the first two months, these Marauders were beginning to "drive the Germans crazy," according to a dispatch by Bob Considine. They had participated in 2,500 sorties with only eleven losses. In an intermediate period total of 892 Marauder sorties had resulted in only two losses.

In September alone, Marauders dropped 2,790 tons of bombs. During the same period American heavy bombers from English bases dropped 5,400 tons—only twice as many, but there are two types of heavy bombers.

The activity dropped off during October, due to three continuous weeks of foul flying weather. Heavy autumn fogs kept the Marauders grounded. However, the crews did manage to drop 835 tons of bombs in 1,000 sorties against 11 enemy air bases.

In November and the first three weeks in December, Marauders went back to work and almost doubled their activity of the preceding three and a half months.

Typical of the men who made such a record possible are a handful of fighting group commanders—veteran fliers, now wearing the silver eagles of colonels, who have trained their medium bomber crews and then led them into combat on the first missions and later participated in the most difficult missions, assigned to the Marauder units.

Veteran Commanders

They are men like Col. Lester J. Maitland, of Wisconsin, veteran of the Philippine campaign; 31-year-old Col. Glenn C. Nye, Winterville, N. C., and Col. Herbert B. Thatcher, Chevy Chase, Md.

After commanding at Clark Field in the Philippines and getting out via Australia, Col. Maitland returned to the United States. He was asked what bomber he wanted for his projected group, and replied without hesitation: "The B-26." When asked why, Col. Maitland replied: "Because I think it's the best bomber yet developed."

A man of few words, he told his newly assembled fliers: "You will observe military discipline while you are in my command. I have found that careless habits on the ground result in careless habits in the air. We will have none of either."

His men heeded his words, as results show. In more than 15,000 hours of training flights, there were no operational accidents. Before leading his men into combat Col. Maitland said: "I will never let you go on a mission from which you will not have a good chance of coming back." He then led his group on its first six missions.

Led Key Missions

Col. Nye is one of the most youthful bomber group commanders of the war. He has the Distinguished Flying Cross for leading his group on five key missions in July and August. Before a mission, he would typically brief his men as follows:

"That is not the airfield. The airfield is here south of the woods. Do not drop your bombs early. Bombs dropped back here are wasted. They will hurt our friends, burn their wheat fields and do us harm."

One day, after Col. Thatcher had been leading his men on numerous important missions over France, his wing commander quietly informed him that it was preferred that he limit his missions to two per month. The young Marylander nodded in agreement, but there was a sly twinkle behind his usually inscrutable eyes.

The following morning he led his formation on a raid against the railway marshalling yards at Abbeville, France. When asked about it later, he replied quickly:

"Two a month—he meant two a day."

Those are the men who fly the Marauders. Together they have written one of the most glorious pages in the history of aerial warfare. For when the complete history of the coming invasion of Western Europe is written, it may well be that Baltimore built Marauders will receive full credit for their part in striking the first direct blow.

★ ★ ★

Veteran Of Two Wars

Photographer Frank Gehr, newest addition to the Photographic Department, is a veteran of World Wars I and II. In the last war he served in the infantry and in this one he served with the Army Air Forces as a photographic instructor.

Part Indian, Gehr is a man who has developed his many hobbies into a life career. Born in Crawford county, Pa., he was raised in an outdoor life. His hobbies were nature, woodcraft, hunting and photography.

MARTIN STAR PLAYERS
ED KILGUS CANTON DIVISION
ARE YA READY?
WON BIG BALTIMORE INDUSTRIAL TENNIS CHAMPIONSHIP IN 1943 AND HAS HELD NUMEROUS OTHER TITLES IN PENNSYLVANIA AND NEW YORK.
"SIS" CUNNINGHAM SURFACE & FLOATS, PLANT 1.
GEE!
SONJA HENIE ?
NAW!! "SIS" CUNNINGHAM
WINNER OF MANY MEDALS AND TROPHIES FOR HER ICE SKATING DASHES IN BALTIMORE, WASHINGTON, NEW YORK, DETROIT.
HERB LOATS FINISHING AND PLATING ARMY DIVISION
WANTA BORROW MY NAIL CLIPPERS-COACH?
TUH!
HOLD THAT LINE!!! — HOLD THAT LINE!!!
COACHED NUMEROUS FOOTBALL CLUBS TO CHAMPIONSHIPS - INCLUDING ROOSEVELT CLUB IN NORTH BALTIMORE LEAGUE 1943.
HERMAN PEARCE FINISHING AND PLATING ARMY DIVISION
WOW THAT SHOULDA' BEEN A STRIKE!!!
PHE!
OH YEAH!!
HAD 128 AVERAGE LAST SUMMER AT HARFORD BOWLING CENTER. NOW CARRYING 120 IN MARTIN MAJOR LEAGUE AND 132 IN BOWLING EXCHANGE INTER-ALLEY LEAGUE.
-wiecand

Mars

(*Continued from page 7*)

H. "Tex" Witherspoon, U.S.N.R., and Lieutenant (jg) W. Curtis "Curt" Potter, U.S.N.R. The former was the first American to join the RAF, has also served in the RCAF. A year ago he was on Guadalcanal.

Aft, on the same side, before the instrument-studded flight panel, where 150-odd dials record performance of the engines, fuel stocks and myriad other items, are Lieutenants (jg) Dumont and Hamilton, and Ensign Albert H. Geck, U.S.N., the engineers.

"She's off!"

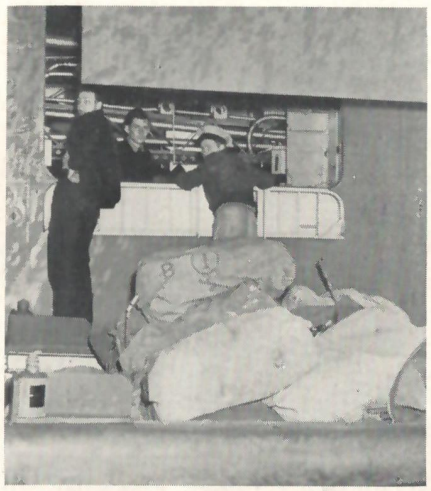
Below, Warrant Carpenter Donald J. Malles, U.S.N., and his crew man their posts. There are Jesse R. Jenkins, AMM1c Larry J. "Junior" Lundgren, AMM1c, Clovis A. Norwood, ACMM. They are forward, midships, and aft, each with a telephone receiver and transmitter connected with the bridge. They scan the water, the engines, the wings, watching hawklike for the first sign of trouble. The skipper checks with Ensign Geck, the temperature of the engines. The engineer eyes the many dials, replies: "All okay, sir." Without fanfare, the Skipper, throttles at full power. The four engines bellowing their might, move the Mars down the river. Faster, ever faster, the mammoth boat moves. Up on the step she goes. Time seems to stop. Actually, less than a minute passes until the Mars is airborne, climbing across Chesapeake Bay, winging straight for the Atlantic.

Only quiet comment is heard as the takeoff is made. Nobody had had any doubt. The officer assigned by the Navy Department to the trip is the tensest person aboard. He has worked with airplanes for some time, but has never seen anything like this. Lieutenant Witherspoon told him, though, as they walked down the ramp that morning: "Don't worry. The 'Old Lady' will do it—whatever it is."

Life aboard settles down a bit. Before departure, the Skipper filed a flight plan estimating that the trip would take 28 hours. (It took 25 minutes longer.) Now the navigators set up for dead reckoning, estimating position for every hour on the half hour. The engineers begin work on their many test and flight data sheets covering gas consumption, efficiency curves, etc. This activity goes on throughout the flight, in watches.

Engines Steady

Throttled back to cruising speed, the four Wrights provide a steady symphonic background for the activity in the plane. Br-r-r-r-r, Bz-z-z-z, never faltering, never faltering. These engines along with every square inch of the big boat, are the pride of Chief Bill Perry, (William H. Perry, Chief Specialist (Inspection) U.S.N.R., of Baltimore, Maryland),



Loading part of the cargo. The 148,500 pounds of ship and cargo was the heaviest weight ever flown.

grizzled, greying, roly-poly veteran inspector who was present at the keel-laying of the Mars. "I punched the first rivet," proudly declaims this World War I veteran who wears the Victory, French Legion of Honor, Mexican Service, and Verdum Medals.

The flight is four hours and 38 minutes old, is 200 miles southwest of Bermuda. Chief Larkin prepares and serves lunch —steak, canned pears, bread and butter, coffee.

Now the stinging cold of the North Atlantic is dissipating as the South gathers the winging giantess into its warmth.

Everybody is so concerned over the gasoline situation that no one thinks to initiate the pollywogs when the Mars crosses the Equator at 9:23 a.m. All save the Skipper, who remembers one man who hadn't "crossed the line" and takes time to run down to the waist compartment from the bridge. There, bent over, peering out the port hatch at the ocean streaming by below is Chief Perry, "pappy" of the Mars. The Skipper, with a cupful of precious hot water appropriated from the galley, sneaks up behind the Chief and pours the liquid into an inviting pocket. The Chief jumps a foot, would dive out the hatch only it is too small to admit his bulk. The Chief is now the happiest man aboard. He's been initiated by the Skipper himself.

Land, ho! At seven minutes after one —there she blows! The "Old Lady" is right on the beam. It's the north coast of Brazil, about 15 miles east of Macau.

Now we're drawing close, the engines seem to say. The Skipper and Lieutenant Baker are on the bridge. The Skipper is talking to Natal, telling them he's coming, to get ready. The river heaves in sight, a slender, silver thread in the distance. Rapidly it grows. There's a bridge, beyond lies a bend in the river. Cool, unhurried the Skipper circles the area, checking the wind and the surface. So efficiently and quickly does he come in for a landing that most of those bunched behind him on the Flight Deck don't know the big boat is down on the water. The Skipper turns and with a tired grin, says simply: "Well, we made it, boys. Thanks."

Start Return Flight

The return to the States begins with an early morning take-off, for Belem. The men of the Mars, the strain of the long, nonstop flight removed, accumulate more test data, list desirable changes and additions to the boat's equipment. The flight is straight over the Amazonian jungles, brilliant and as dangerous—looking from 10,000 feet as in reality they are. The hop is uneventful.

In early morning, the Mars is up and away again, this time bearing the greatest cargo load ever carried—35,000 pounds. The Skipper makes all these takeoffs and landings so perfectly and effortlessly that the great skills necessary for their accomplishment are almost overlooked. Away flies the Mars to Port of Spain, Trinidad, more than 1,200 miles to the Northwest.

In early morning again, takeoff is made for Bermuda. Cumulus batters the boat around a bit. The Skipper takes her up and around, slipping around the edges of the big thunderheads. The drafts they contain can tear a plane to pieces, and the Mars is still an experimental plane. It's 1,540 miles to Bermuda, second longest leg of the journey. The "Old Lady" makes it—easy. Forty-four hundred pounds of airmail—all there is in Bermuda—is taken on. The Skipper makes the same statement to all at every stop: "We'll take all you've got. That's what we're here for."

The hop to Patuxent is a short one—five hours odd—and the Mars is home again. Her precious cargo is unloaded. Mission is accomplished.

Crew of the Mars on its historic flight to Natal and back. Insert is of Lieut. Comdr. William E. Coney, veteran pilot, who was at the controls.

Tail Turret Tales

(*Continued from page* 9)

tem of our plane was shot out by flak over the target," Pilot Romney J. Spencer, Miami, Fla., reported. "Four of our instruments were out, including the fuel gage, and our nose wheel failed to come down as we came over the field to make our landing. My co-pilot pumped the gear down by hand but I had to land well down the runway in order to give him time to get it locked. The hydraulic system was shot so we had no brakes and had to use the emergency brakes. We reached the end of the runway and went off into the dirt, where the combination of a ditch and the application of the air brake threw the plane on its nose. Despite the damage to the ship, none of the crew was injured."

Tells Amazing Story

An amazing story of Marauder performance was told by Captain Donald L. Weiss of Denison, Iowa, and his crew when they returned to their base after a recent bombing mission.

"We were well into France and just at the point where we were to start our bomb run when the right engine quit," he said. "As we had to get rid of the bombs to lighten the ship, I decided to make a run on one engine. After getting the bombs away, we turned and made for the coast. There were tracers coming at us from every direction. I had heard that evasive action could be employed on one engine and decided if it could be done, we could do it. So we did—all the way out past the French coast."

"As we passed over the target I could see the bomb pattern from the rest of our formation and the results were good," Bombardier-Navigator 1st Lt. David Meserow of Oak Park, Ill., added, "I think the evasive action employed by Captain Weiss saved us all from getting shot. It was the sweetest flying I've ever seen. Anyone who says a Marauder won't handle on one engine is crazy as hell."

"On A Wing And A Prayer"

This was really bringing them "in on a wing and a prayer"—and these reports are not the exceptions, by far. Stories of Marauder performance come every day from Boulogne, Poix, Merville, St. Omer, Beaumont le Roger, Bryas-Sud, Glisey, Ghent, Tricqueville, Courtrai, Lille and almost every larger Nazi fighter base in the Occupied Countries.

The B-26 toll of destruction is beginning to tell plenty on the Nazi opposition, too.

Repeated assaults on German fighter fields in Western Europe by the U. S. Marauder medium bombers have caused Nazi fighters to withdraw from many front line airfields.

She's engaged! She's lovely! So sing the face cream advertisements now appearing in leading national magazines featuring Hilda Holder, clerk in Martin's Body department, Plant I. Hilda used to be the telephone operator, but preferred the staccato of a rivet gun at Martin's to the drone of human voices. She is now a clerk in the Body department. Hilda's fiance, Richard D. Davis, is on duty with the fleet somewhere in the South Pacific.

THIS MONTH'S COVER

The picture on the front cover is another of those combined efforts of THE STAR'S indefatigable photographers—Charles Cignatta and Fred Parker. Both were in the camera ship while the Mars was making its famous 32-hour test flight recently, both madly snapping pictures in black and white and in kodachrome. Which one took the picture shown is unknown.

The drawing on the back cover was made by John T. Gorsuch, Art Department, who did the June, 1943, cover in color and whose work has frequently appeared on the pages of THE STAR.

From England came the group of pictures at the left. Salvo the Parapup was flown to England in the Marauder "Jessabell" and was the first mascot to be equipped with parachute. He is shown at ease on a Martin car and making a jump. The group at top right include only a few of the Martin service men in England. Standing are Charles L. Clark, Clarence J. Hill, Roger Ward (who has been sending such swell reports on the B-26 and is Factory Representative) and Columbus D. Weeks; kneeling are Edward A. Donelan, John H. Shenley, Melvin J. Taylor and Warren R. Hohl. The Marauder "Nemo," shown at bottom, has been playing havoc with the Axis every time it goes on a mission.

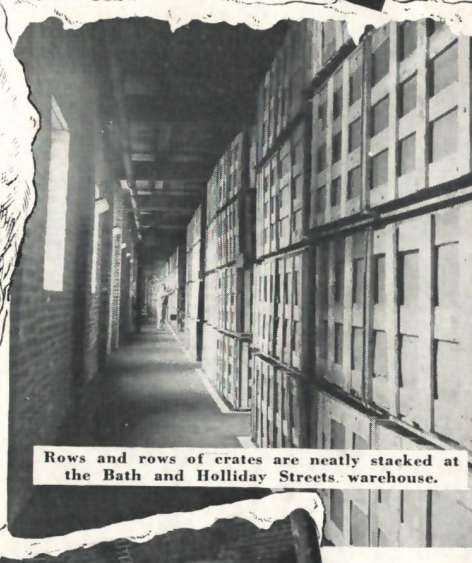
Ruth Brightwell, Eleanor Figinski and Elizabeth Bamberger fill stationery orders at Haven Street warehouse.

Tires for Martin bombers are stored in the Pratt Street warehouse until needed.

IT TAKES WAREHOUSES too!

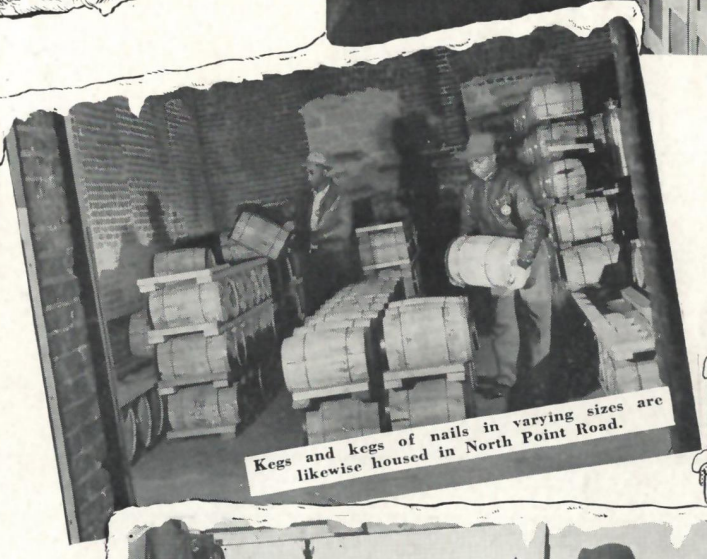
Vast quantities of materials of all kinds must be kept on hand to maintain the steady flow of Martin bombers. There just isn't enough room at Middle River and Canton, so ten other warehouses scattered about Baltimore are inconspicuously housing a varied assortment of supplies. Whereas in 1939 there were but 65,000 square feet of storage space at Middle River and Canton, today the combined area is three-quarters of a million, while from 500 employees Raw Stores, of which the warehouses are a part, now number nearly 2,000. Just a few typical pictures of some of the warehouses are shown here.

Juliette Maltesee (writing) and Media Black check stationery supplies at Haven Street.



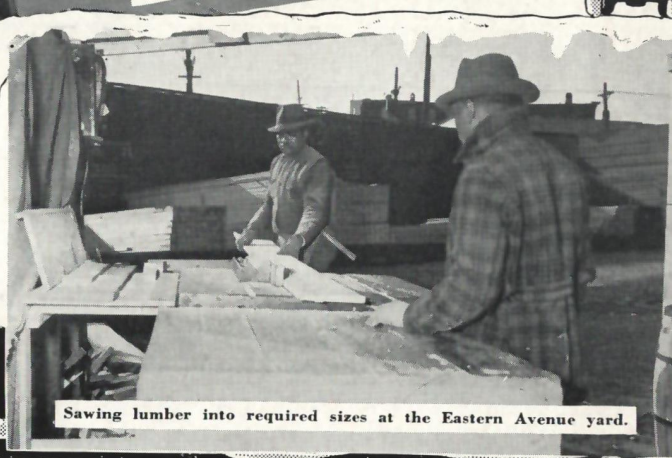
Rows and rows of crates are neatly stacked at the Bath and Holliday Streets warehouse.

Elevators awaiting placement on planes are stored in North Point Road warehouse.



Kegs and kegs of nails in varying sizes are likewise housed in North Point Road.

A lot of lumber is used around the plants and is kept at the Eastern Avenue yard.



Sawing lumber into required sizes at the Eastern Avenue yard.

Knell of the Sea Wolves

J.T. GORSUCH
ART DEPT